COLLEGE OF ENGINEERING & TECHNOLOGY

Department: Electronics and Communications Engineering, Cairo

Graduation Project Description Form

Project Supervisor(s):Prof. Mohamed Hassan

Project Title: Design, Simulation of Frequency Selective Surfaces (FSS) Structures

Generation Cellular Networks.

Duration from 9/2013 ___till 7/2014 _____

Product Category

Algorithm___ Hardware✓__ Software✓__

Standards:

Safety: UL, CE_____ IEEE ✓____ FCC___

Other _____

Practical Realization Form

PCB _____ Firmware__ Embedded CPU Kit (ARM, ..etc):_____

PC Software _____ Ready-made Package___ DSP Kit__ FPGA Kit_✓

VLSI Schematics __ VLSI Layout ___ VLSI Silicon (ASIC)_____

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Language

VHDL/Verilog ✓ Matlab ✓ C/C++/Java _____

Productization

Finished Product Form:__ Possible Commercialization _____

Amount of funds needed for buying components: _____

IEEE GOLD Made-In-Egypt/Engineering Day: _

ITAC (ITIDA) or NTRA Funding Application:_

Testing

Functional__✓ Simulation✓_____ Parameters__ Final Hardware✓_Other:

Lab Test Setup

EMC _____ Environmental_____ Microwave _____ Analog Lab_____
Other:

CAD Tools *(No unauthentic software is allowed):*

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Elective Classes Required:

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Abstract

Two dimensional periodic arrays of patch elements can be used as frequency selective surfaces (FSS) owing to the frequency filtering properties of these structures.
Depending on their physical construction, material and geometry, they are divided into: Law Pass, High Pass, Band Pass and Band Stop Filters
In this project we will use the microstrip Technique to fabricate the FSS structures, we will also use on of the numerical techniques to simulate these structures. Finally we will measure the fabricated structures and compare the results with the simulated results.

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References and Links